



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/063,603

05/03/2002

Guanzhong Gao

124048

9697

6147

7590

11/10/2004

GENERAL ELECTRIC COMPANY

GLOBAL RESEARCH

PATENT DOCKET RM. BLDG. K1-4A59

NISKAYUNA, NY 12309

EXAMINER

LIEU, JULIE BICHNGOC

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/063,603	GAO ET AL.	
	Examiner	Art Unit	
	Julie Lieu	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7, 11-17, 21-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17, 21-24, and 26-30 is/are allowed.
- 6) ☒ Claim(s) 5-7 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2636

DETAILED ACTION

1. This office action is in response to Applicant's amendment filed July 21, 2004. Claims 11-4, 8-10, 18-2025, and 31 have been canceled.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The indicated allowability of claims 5-7 is withdrawn in view of the following reason:

Claim Rejections - 35 USC § 103

4. Claims 5-7 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregory et al. (US Patent Application No. 2003/0151412)

Claim 5:

Gregory discloses a monitoring system comprising at least one partial discharge sensor 24, which is configured to monitor a component of a wiring system to acquire monitoring signal. Though the wiring system to be monitored in Gregory is not necessary use for an aircraft component. However, it would have been obvious to one skilled in the art to use the same concept in any environment as well as in an aircraft system because the function of the device is to detect partial discharge and its function would not thereby be modified. The PD sensor in Gregory comprises a high frequency current transformer encompassing the component. Page 3,

Art Unit: 2636

[0032]. Though it is not clearly disclosed, it would have been obvious to one skilled in the art that the HFCT 24 includes conductive leads and a housing enclosing the device functionally equivalent to a cap. Lacking any criticality as to why the conductive leads must be formed on a substrate, what unexpected result would be produced, or what stated problem it would solve, it appears that the HFCT 24 is functionally equivalent to that claimed, regardless of the specific feature whether the conductive leads are formed on the substrate.

Claim 6:

The component in Gregory is a conductive core surrounded by an insulating layer, i.e. a cable, and wherein the current transformer 24 sensor extends around the insulating layer.

Claim 7:

Though a PD sensor in Gregory is used to monitor a cable, it would have been obvious to one skilled in the art to use it to monitors as desired because they are similar except a cable is larger than a wire. The PD sensor in Gregory would still function the same. Though only one cable is shown in Gregory, it would have been obvious to one skilled in the art to use the PD devices taught in Gregory with a plurality of wires or cable, each wire/cable comprising a conductive core surrounded by an insulating layer, wherein the current transformer sensor extends around the wires.

Claim 11:

The monitoring unit in Gregory comprises a PD sensor, a self-monitoring unit, wherein the component comprises a wire set, which includes at least one wire and is connected to the self-monitoring unit, wherein the PD sensor is configured to monitor the wire.

Claim 12:

Art Unit: 2636

Fig. 6 in Gregory shows a system equivalent to a data acquisition system, which is configured to receive the monitoring signal; and at least one hard-wired connector configured to connect the monitoring unit to the data acquisition system for conveying the monitoring signal.

Claim 13:

The monitoring unit in Gregory further comprises a transmitter, which is configured to transmit a monitoring signal.

Claim 14:

The data acquisition system in Gregory includes a receiver which is configured to receive the monitoring signal, and a memory which is configured to store the monitoring signal.

Allowable Subject Matter

5. Claims 15-17, 21-24, 26, and 27-30 are allowed.

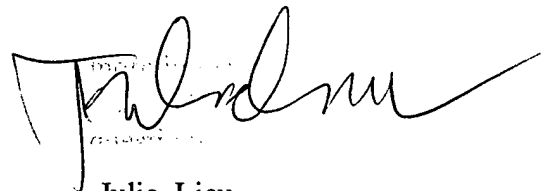
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on Mon-Fri 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2636

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Julie Lieu
Primary Examiner
Art Unit 2636

Nov 03, 04